THE LINDE GROUP

G-TECTA™
Portable Gas Detection Instruments

Why Linde gas detection?

The Linde Group is a global leader in the supply of gases, we provide expertise and product solutions to industry, commerce, science and research operations.

Our expertise in the safe use of gas gives you the assurance that we understand your needs when it comes to protecting your workers, and makes us the ideal partner to provide gas detection solutions and support.

In addition, we can also provide the bump test and calibration gases required to test your instruments in use, giving you a complete solution for your gas detection needs.

The Linde G-TECTA™ portable gas detection range has been designed to be easy to use, offering simple one button operation, capable of being used and tested by field engineers through to manufacturing operatives.

The bright red colour and reflective label designs ensure the gas detectors are highly visible when worn, maintaining compliance and safety in all areas of your business.

Linde G-TECTA™ multi-gas instruments have upward facing displays, maximising the awareness of the gas levels in confined spaces as well as visible alarms. G-TECTA™ single gas instruments are compact and easy to wear, ensuring your safety whilst being unobtrusive and comfortable.

G-TECTA™ sensor technology ensures reliable and high quality gas readings and an immediate warning indication if there are any issues with the functionality of the sensor.

Accountability is assured as data can be downloaded from G-TECTA™ instruments to any PC of your choice via G-TECTA™ PC software and the instrument charger with computer interface or infra-red port.

All Linde instruments are certified to global standards and are suitable for use in potentially explosive environments as well as safe areas.

Linde G-TECTA™ gas detection in combination with Linde Group gases is the professionals choice for complete protection and service.

Which instrument is for you?

G-TECTA™ SG_2 Single Gas

- Compact design
- Heavy duty - extremely robust
- Cam lock attachment
- Disposable - 2 year life
- Limited training required for use
- 7 sensor options
- IP65 rated
- Bump test docking solution

G-TECTA™ SG Single Gas

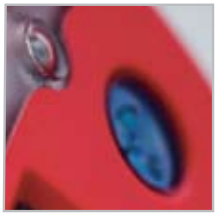
- Premium instrument
- 28 gas sensor options
- Intelligent gas sensing
- Data logging capability
- Alligator clip attachment
- Compact design
- Lightweight and robust
- IP65 rated and designed to IP67

G-TECTA™ 4G Multi Gas

- 3 Port - 4 Gas instrument
- 14 gas sensor options
- Data logging capability
- Compact design
- Top display
- Alligator clip attachment
- IP65 and IP67 rated

G-TECTA™ 4GP Multi Gas

- 4 port - 4 Gas Instrument
- 26 gas sensor options
- Data logging capability
- Internal Pump as standard (non-pump option)
- Heavy duty - extremely robust
- Cam lock attachment
- Infra-red data download
- IP65 rated



Product features – Single gas

G-TECTA™ SG_2

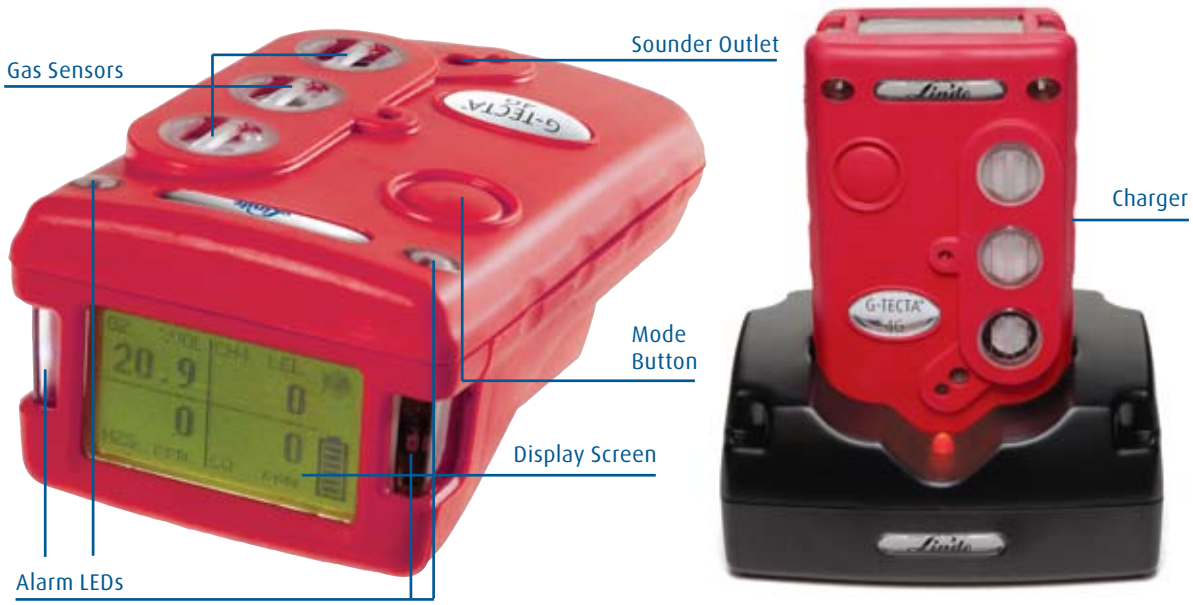
The G-TECTA™ SG_2 instrument offers the user a simple to use, low maintenance disposable gas detector with a warranted 2 year life. Designed to resist the most arduous environments and to be used with basic training, the G-TECTA™ SG_2 is ideal for contract work and where limited functionality is a requirement.

G-TECTA™ SG

G-TECTA™ SG is a fully functional premium single gas instrument, water and dust resistant, with one button operation and a choice of 28 sensors to suit almost every application. The lightweight and robust design combined with full download and data logging capability offers the ideal single gas solution for both operators and engineers across all industries.

Product features – Multi-gas

G-TECTA™ 4G



The G-TECTA™ 4G is a compact and easy to use four gas instrument with full data management and operator functionality. With 14 sensor options, one button operation and a robust water and dust resistant ergonomic casing, G-TECTA™ 4G is the ideal confined space entry monitor.

G-TECTA™ 4GP

With a choice of 26 sensors, the G-TECTA™ 4GP provides a multi-gas solution for almost every environment. An integrated pump and charger, single button operation and full data management allows the user to effectively manage their gas detection requirements with confidence. G-TECTA™ 4GP has infrared communication is extremely robust and is ideal for environments where deep water may be encountered.

Technical data

G-TECTA™ SG_2

G-TECTA™ SG_2 Product Specification	
Dimensions	69 x 63 x 38 mm
Weight	125g
IP Rating (Dusts & Liquids)	IP65
Operating Temperature Rating	-20°C Ta +50°C (-4°F Ta +122°F)
Humidity Rating	5-95% RH – non-condensing
Unit Life	2 Years disposable/recyclable
Warm-up time period	8 seconds
Typical response time	5 seconds
Alarm sounders	94dB(A) at 30cm 85dB(A) at 1m
Visible alarms	4 multi-angled red flashing LEDs
Electromagnetic Compatibility	EN50270
Explosion Protection Certification	IECEx/ATEX/UL/CSA
IECEx	IECEx BAS 09.0119
ATEX	BASEEFA09ATEX0248
UL	UL913
CSA	CSA22.2
Approval Codes	
Global	IECEx II 1G Ex ia IIC T4 Ga
USA	Class I Division 1, Groups A, B, C and D
CSA	Class I Division 1, Groups A, B, C and D
Safety & Operation Standards	EN50014 EN50020 prEN50271

G-TECTA™ SG

G-TECTA™ SG Product Specification	
Dimensions	90 x 48 x 24 mm
Weight	90g (with toxic sensor) 105g (with oxygen sensor) 130g (with flammable sensor)
IP Rating (Dusts & Liquids)	IP65 (NEMA 4) & designed to IP67
Operating Temperature Rating	-20°C Ta +65°C (-4°F Ta +149°F)
Humidity Rating	20-90% RH – non-condensing, continuous operation
Display	Bespoke LCD with backlight Starburst characters – number & text display, screen icons (status & mode)
Warm-up time period	Maximum 90 seconds
Typical response time	T90: 10 seconds (oxygen) 20 seconds (toxic & flammable)
Alarm sounders	95dB(A) Optional multiple alarm sounds
Visible alarms	Dual colour Blue/Red flashing LEDs
Vibrating alarm	Internal vibrating
Repeatability	±2% FSD, 6 months
Electromagnetic Compatibility	2004/108/EC
Explosion Protection Certification	IECEx/ATEX/UL/CSA
IECEx	IECEx BAS 09.0115 Flammable IECEx BAS 09.0116 Oxygen/Toxic
ATEX	BASEEFA09ATEX0240 Flammable BASEEFA09ATEX0244 Oxygen/Toxic
UL	UL913
CSA	CSA22.2, 152
Approval Codes	
Global	IECEx II 2G Ex ia d IIC T4 Gb Flammable IECEx II 1G Ex ia IIC T4 Ga Oxygen/Toxic
USA	Class I Division 1, Groups A, B, C and D
CSA	Class I Division 1, Groups A, B, C and D
Safety & Operation Standards	EN60079-0, EN60079-1, EN60076-11, 94/9/EC EN50270, EN50271, IEC61508, EN61779

G-TECTA™ 4G

G-TECTA™ 4G Product Specification	
Dimensions	71 x 114 x 48 mm
Weight	295g (with alligator clip & 3 sensors)
IP Rating (Dusts & Liquids)	IP65 & IP67
Operating Temperature Rating	-20°C Ta +55°C (-4°F Ta +131°F)
Humidity Rating	20-90% RH – non-condensing, continuous operation
Display	128 x 64 Pixel with backlight
Warm-up time period	Approx 45 seconds
Typical response time	T90: 10 seconds (oxygen) 20 seconds (toxic & flammable)
Alarm sounders	95dB(A) Optional multiple alarm sounds
Visible alarms	Dual colour Blue/Red flashing LEDs
Vibrating alarm	Internal vibrating
Repeatability	±2% FSD, 6 months
Electromagnetic Compatibility	2004/108/EC
Explosion Protection Certification	IECEx/ATEX/CSA
IECEx	IECEx BAS 09.0117
ATEX	BASEEFA09ATEX0245
CSA	CSA22.2, 152
Approval Codes	
Global	IECEx II 2G Ex ia d IIC T4 Gb
CSA	Class I Division 1, Groups A, B, C and D
Safety & Operation Standards	EN50014, EN50020, EN50018, 94/9/EC EN50270, EN50271

G-TECTA™ 4GP

G-TECTA™ 4GP Product Specification	
Dimensions	122 x 128 x 57 mm
Weight	498g (with attachment clip & 4 sensors)
IP Rating (Dusts & Liquids)	IP65 NEMA 4
Operating Temperature Rating	-20°C Ta +55°C (-4°F Ta +131°F)
Humidity Rating	20-90% RH – non-condensing, continuous operation
Display	128 x 64 Pixel with backlight
Warm-up time period	Approx 45 seconds
Typical response time	T90: 20 seconds (toxic & flammable) 10 seconds (oxygen)
Alarm sounders	95dB(A) Optional multiple alarm sounds
Visible alarms	Dual colour Blue/Red flashing LEDs
Vibrating alarm	Internal vibrating
Repeatability	±2% FSD, 6 months
Electromagnetic Compatibility	2004/108/EC
Explosion Protection Certification	IECEx/ATEX/UL/CSA
IECEx	IECEx BAS 09.0118
ATEX	BASEEFA09ATEX0246
UL	UL913
CSA	CSA22.2, 152
Approval Codes	
Global	IECEx II 2G Ex ia d IIC T4 Gb Rechargeable IECEx II 2G Ex ia d IIC T3 Gb Replaceable Batteries
USA	Class I Division 1, Groups A, B, C and D
CSA	Class I Division 1, Groups A, B, C and D T4
MED (Marine Equipment Directive)	96/98/EC (optional approval)
Safety & Operation Standards	EN50014, EN50020, EN50018, 94/9/EC EN50270, EN50271, IEC61508

Product selection matrix

		Common Gas Hazards					
		Combustible Gases and Vapors (LEL)	O_2 – Oxygen Deficiency	CO – Carbon Monoxide	H_2S – Hydrogen Sulphide	SO_2 – Sulphur Dioxide	NH_3 – Ammonia
Markets	Agriculture	•	•	•	•		•
	Aircraft Maintenance	•	•	•			
	Chemical Manufacturing	•	•	•	•	•	•
	Construction	•	•	•	•		
	Electrical Utilities	•	•	•	•	•	
	Fire	•	•	•	•		
	Food and Beverage Manufacture	•	•	•	•		•
	Gas Utilities	•	•		•		
	Hospitality		•				
	Manufacturing	•	•	•	•		
	Oil & Gas Production	•	•	•	•		•
	Petrochemical and Refining	•	•	•	•		•
	Pulp & Paper	•	•	•	•	•	•
	Pharmaceutical	•	•		•	•	•
	Power Plants	•	•	•	•	•	
	Councils	•	•	•	•	•	
	Shipyards	•	•	•	•		
	Steel Mills and Foundries	•	•	•	•	•	
	Water & Wastewater Treatment	•	•	•	•	•	•
	Welding	•	•	•			

Selection logic

Single Gas Instruments

G-TECTA™ SG_2 - Disposable instrument, no maintenance, 2 year life
G-TECTA™ SG - Choice of re-chargeable or alkaline replaceable batteries.

Multi-Gas Instruments

G-TECTA™ 4G - 3 sensor ports, 4 gas display. 4 gas instrument must have CO/H_2S dual gas sensor installed. Re-chargeable battery only.
G-TECTA™ 4GP - 4 sensors, 4 gas display. Choice of re-chargeable or alkaline replaceable batteries. Internal pump as standard - non-pump option.

Hazard Instrument matrix

		Common Gas Hazards					
		Combustible Gases and Vapors (LEL)	O_2 – Oxygen Deficiency	CO – Carbon Monoxide	H_2S – Hydrogen Sulphide	SO_2 – Sulphur Dioxide	NH_3 – Ammonia
Instruments	G-TECTA™ SG_2	•	•	•	•		
	G-TECTA™ SG	•	•	•	•	•	•
	G-TECTA™ 4G	•	•	•	•	•	•
	G-TECTA™ 4GP	•	•	•	•	•	•

Cl_2 – Chlorine	ClO_2 – Chlorine Dioxide	CO_2 – Carbon Dioxide	H_2 – Hydrogen	HCN – Hydrogen Cyanide	NO – Nitric Oxide	NO_2 – Nitrogen Dioxide	O_3 – Ozone	PH_3 – Phosphine
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Cl_2 – Chlorine	ClO_2 – Chlorine Dioxide	CO_2 – Carbon Dioxide	H_2 – Hydrogen	HCN – Hydrogen Cyanide	NO – Nitric Oxide	NO_2 – Nitrogen Dioxide	O_3 – Ozone	PH_3 – Phosphine
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Data Management and Accessories

Data management of gas detection instruments is an important element in any gas detection programme.

G-TECTA™ SG, 4G and 4GP instruments can easily be connected to a computer to enable downloads of data, changes in instrument settings and gas testing. This functionality in simple form is also available for G-TECTA™ SG_2 via connection to a docking station (G-DOCKA SG_2). There is a full range of optional accessories, including battery and charging options, sampling kits, and connections available for the G-TECTA™ product family.

G-TECTA™ PC Software

G-TECTA™ PC software provides the interface between the G-TECTA™ instrument and a PC. The instrument software allows you to download data and upload instrument settings quickly and easily. The software is available to download free of charge from the www.g-tecta.com website.

G-TECTA™ Data Logging

G-TECTA™ instruments can record up to 900 hours of data at 1 minute intervals and can record over 4800 events. Every event is recorded in the instrument for full accountability and understanding of any sequence of events that occur to the user whilst wearing or carrying the instrument.

G-TECTA™ Chargers

Re-chargeable G-TECTA™ instruments are supplied with a standard charger and power lead. The optional charger with PC interface is available to order on request and comes complete with connection leads for a PC.

Accessories

There is a full range of accessories for Linde G-TECTA™ instruments including:

- Docking stations
- Battery chargers
- Multi-chargers
- Vehicle chargers
- Aspirators
- Neck & Chest harnesses
- Instrument cases
- Probes
- Spare filters
- Confined space entry kits
- Bump test & Calibration kits

For a full selection of accessories available, please see the G-TECTA™ price list or visit the www.g-tecta.com website.

Bump Test & Calibration Gas

G-TECTA™ products, like all gas detection equipment, require regular bump test and calibration as they protect people from hazardous situations caused by toxic, corrosive or flammable gas that has escaped into the area in which that person is working.

As a global supplier of gases, Linde is able to provide you with the calibration gas you require to ensure that all G-TECTA™ equipment is correctly bump test and calibrated every time.

We manufacturer a diverse range of gases engineered to meet a wide range of measurement, process control requirements and industry standards. Using state of the art technology we are able to produce highly stable and accurate gas mixtures specific to your needs, for reliable and repeat calibration time and time again. This enables the wearer to carry out their responsibilities secure in the knowledge that their safety is taken care of.

G-TECTA™ Instrument Bump Testing

G-TECTA™ instruments can be bump tested by using the gas test key with the instrument and applying gas. The sophisticated electronic management system within the instrument recognises the type of gas being applied and checks the function of the sensor without having to attach the instrument to a separate docking station or a PC. The data is recorded in the instrument and can be downloaded to a PC when convenient. Calibration is also simple and convenient using either similar functionality to the bump test or by connecting the instrument to a PC or the Linde G-DOCKA hub.

Servicing & Calibration

We recommend that all G-TECTA™ instruments are routinely calibrated and serviced to maximise their reliability and integrity. Linde Group approved service centres are trained to provide a complete service offer for all G-TECTA™ instruments. Please contact your local Linde Group business for further details.

www.g-tecta.com

The G-TECTA™ website is an information tool, designed to give you access to all the information you need to select the most appropriate instrument for your needs. The g-tecta.com website also has approval information and links to your local Linde Group business.

Getting ahead through innovation.

With its innovative concepts, Linde is playing a pioneering role in the global market. As a technology leader, it is our task to constantly raise the bar. Traditionally driven by entrepreneurship, we are working steadily on new high-quality products and innovative processes.

Linde offers more. We create added value, clearly discernible competitive advantages, and greater profitability. Each concept is tailored specifically to meet our customers' requirements – offering standardized as well as customized solutions. This applies to all industries and all companies regardless of their size.

If you want to keep pace with tomorrow's competition, you need a partner by your side for whom top quality, process optimization, and enhanced productivity are part of daily business. However, we define partnership not merely as being there for you but being with you. After all, joint activities form the core of commercial success.

Linde – ideas become solutions.

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